Notes from Tuesday 3-27

Hawaiian Hotspot

 Thin crust of BASALT

 Open path

 LOW gas

 LOW silica

Just basalt

Pressure released daily

Yellowstone Hotspot

 Thick Granite Crust

 No open path

 Rhyolite cap semi solid Over a basalt Pluton

 HIGH gas

 HIGH silica

 Pressure has been building for +500,000 years

What determines chemical composition of magma

 If it is just mantle material, mainly basaltic. Ocean hotspot

 Ocean crust is basalt,

 If it melts and works it way through the granitic base of the continents, there are many more minerals and gasses. Continental hotspot

 Same as if it is at subduction zone, recycled material

 This leads to thicker/gassier magma(rhyolite) and more violent eruptions

How does magma reach surface

* Less Dense than surroundings
* Low density RISES
* Still hot so find weak spot melts thru
* Pressure builds forcing it up also

Eruption

* Magma is now lava-
	+ Flows and projectiles
* Ash into atmosphere
* Gasses ejected
	+ WATER,N2, O2
	+ Early atmosphere???

Inside the volcano

* Magma chamber(Pluton) is the pocket of magma
* Vent is escape route. Main is largest side are lateral vents
* Pipe is neck to chamber
* Crater is top of vent

Magma is liquid rocks and hot gasses

Pyroclastics (pieces of fire) anything ejected from vent

Pyroclastic flow- hot ash and gas flowing at fast rate down slope of volcano. DEADLY